

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): ~~Carousel~~A carousel machine ~~for the treatment of hollow containers, comprising:~~

~~of the type involving several identical~~a carousel on which a plurality of treatment stations
~~(12, 13) are provided, the treatment stations whose purpose is to treat at least one~~for treating a
~~hollow container, the treatment stations being segregated into at least two groups;~~

~~, and of the type in which, for at least one stage of treatment, the treatment station is~~
~~connected to a pressure source by means of a distribution device (18) involving a sealed swivel~~
~~coupling~~the treatment stations to a pressure source during a treatment stage;

~~characterized in that, for the said stage, the machine comprises~~wherein the pressure
~~source includes~~at least two pumps (A1, A2) for providing sources of independent and equivalent
~~pressure (A1, A2) to the treatment stations during the treatment stage;~~ and

~~wherein that the stations are distributed into as many groups (12, 13) as the machine~~
~~involves sources, and in that the means of~~the distribution device (18) are such that couples each
~~source of the at least two pumps (A1, A2) is associated with~~at only one distinct group of
~~treatment stations, such that only one of the pumps (A1) is connectable to only one group of~~
~~treatment stations (12) and the other pump (A2) is connectable to only the other group of~~
~~treatment stations (13).~~treatment stations (13).

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2. (currently amended): A machine according to ~~Claim~~claim 1, ~~characterized wherein by~~
the ~~means of~~distribution device is configured such that, at any instant, one of the ~~said~~
~~source~~pumps is connected to, at ~~the~~most, one treatment station.

3. (currently amended): ~~Machine~~A machine according to claim 1, ~~characterized in~~
~~that~~wherein the means ofdistribution device (18) ~~are~~is configured such that at least one station
(12) of a group ~~might be~~is connected to an associated ~~source~~pump (A1), while at least one
station (13) of another group is connected to ~~its own~~an associated ~~source~~pump (A2).

4. (currently amended): ~~Machine~~A machine according to claim 1, ~~characterized in that~~
~~the~~wherein the distribution device includes a swivel coupling involveshaving as many routes as
the machine has ~~source~~pumps for separately feeding the groups of treatment stations, and ~~in that~~
~~the means of~~wherein the distribution included device includes, downstream of the ~~rotating~~swivel
coupling, ~~some~~a plurality of individual valves associated with each treatment station.

5. (currently amended): ~~Machine according to claim 1~~A carousel machine for the
treatment of hollow containers, the machine including a carousel provided with identical
treatment stations (12, 13) whose purpose is to treat at least one hollow container, and of the type
in which, for at least one stage of treatment, the treatment station is connected to a pressure
source by a distribution device involving a sealed swivel coupling,

wherein, for the stage, the machine comprises at least two sources of independent and equivalent pressure (A1, A2), and that the treatment stations are distributed into as many groups (12, 13) as the machine involves sources, and wherein the distribution device (18) is such that each source (A1, A2) is associated with a distinct group of treatment stations, and

~~characterized in that~~wherein the sealed swivel coupling is ~~realized under the form of a~~ rotating distributor (18) involving two coaxial crowns, ~~the one including a stationary crown (20) and the other a~~ rotating crown (22), which are in contact with each other in a sealed manner at adjacent contact surfaces (24, 26), ~~in that~~

wherein the rotating crown (22) ~~involves some~~has communication ports (28, 29), which are each connected to a treatment station (12, 13), which are distributed in at least as many series as the machine has sources for the ~~said~~ stage; and which terminate in the contact surface (26) of the rotating crown (22), and ~~in that~~ the communication ports of one same series, all correspond to treatment stations of one same group, and follow the same trajectory, while the communication ports of the two different series follow different trajectories, ~~in that~~

wherein the stationary crown (20) ~~implies some~~has lights (34, 35) which are connected to ~~at the pressure sources~~ sources (A1, A2), each of which terminates at the contact surface (24) of the stationary crown (20) in such a way as to be on the trajectory of a series of communication ports (28, 29) of the rotating crown (22), ~~of such a kind that one~~ treatment station is connected to a pressure source when the corresponding communication port is ~~to be found~~ in line with a light associated with this source, ~~in that~~

wherein the stationary crown ~~implies~~has at least as many distinct series of at least one light, as the number of the series of communication ports, and ~~in that~~wherein the two sources of pressure (A1, A2) are each connected to a light of two distinct series of lights (34, 35) of the stationary crown (20).

6. (currently amended): ~~Machine~~A machine according to ~~Claim~~claim 5, ~~characterized in that~~wherein the communication ports (28, 29) of all the treatment stations (12, 13) of one same group, belong to the same series.

7. (currently amended): ~~Machine~~A machine according to ~~Claim~~claim 6, ~~characterized in that~~wherein the contact surfaces (24, 26) of the two crowns (20, 22) are annular faces perpendicular to ~~the~~an axis of rotation (X-X) of the carousel (16).

8. (currently amended): ~~Machine~~A machine according to ~~Claim~~claim 7, ~~characterized in that~~wherein the communication ports (28, 29) of one same series are positioned along a circle, and ~~in that~~wherein the two series of communication ports (28, 29) are positioned according to two circles of different diameters.

9. (currently amended): ~~Machine~~A machine according to Claim 8, ~~characterized in that~~wherein the communication ports (28, 29) of one same series are distributed angularly in a

regular fashion around the axis of rotation (X-X) of the carousel (16), and ~~in that~~wherein the communication ports (28, 29) of two different series involving the same number of communication ports are intercalated angularly.

10. (currently amended): ~~Machine~~A machine according to claim 8, ~~characterized in that~~wherein the lights (34, 35) corresponding to two independent and equivalent sources of pressure (A1, A2), and utilized for said stage, are fitted with an angular displacement (α) and on different diameters, corresponding respectively to the diameters of circles according to which the series of communication ports (28, 29) are fitted, corresponding to the ~~said~~ sources.

11. (currently amended): ~~Machine~~A machine according to Claim 10, ~~characterized in that~~wherein two consecutive communication ports of one same series are angularly separated by an angular displacement (β) at least equal to the angular displacement (α) on which is mounted the corresponding light of the ~~said~~ series.

12. (currently amended): ~~Machine~~A machine according to claim 5, ~~characterized by the fact that this treatment implies~~wherein during a second stage of treatment, during which the treatment stations (12, 13) are connected, by means of ~~a~~the rotating distributor (18), with ~~the~~ secondary sources of pressure (B1, B2) to attain a second level of pressure, in that the stationary crown (20) ~~involves~~includes, by extending each of the first lights (34, 35), secondary lights (36, 37) which are connected each to a ~~second~~respective secondary pressure source (B1, B2), and

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~~that~~wherein the two lights ([34, 36], [35, 37]) associated with the same series of communication ports (28, 29) are separated by an angular displacement (δ) which prevents the simultaneous connection of one communication port with two lights.

13. (currently amended): ~~Machine~~A machine according to claim 1, ~~characterized in that~~wherein the sources of pressure (A1, A2) are at a pressure less than atmospheric pressure.

14. (currently amended): ~~Machine~~A machine according to claim 1, ~~characterized in that~~wherein the treatment includes a stage for which a cold, low-pressure plasma is created, for the purpose of coating the hollow container, ~~in that the treatment includes~~and at least one pumping stage for lowering the internal pressure of the treatment ~~station~~stations, and ~~in that~~wherein the independent and equivalent pressure sources which allow for the realization of the pumping stage, consist of at least two pumps (A1, A2).

15. (currently amended): ~~Rotating~~A rotating distributor for a carousel machine for treatment of hollow containers, the machine involving several identical treatment stations (12, 13) each one designed to treat at least one hollow container, ~~of the type in which~~wherein the rotating distributor (18) ~~implies~~has two coaxial crowns, ~~the one including a stationary crown~~ (20) and ~~the other a~~ rotating crown (22), which are in contact with each other in a sealed manner, by way of adjacent contact surfaces (24, 26), ~~of the type in which~~

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wherein the rotating crown (22) ~~involves~~includes communication ports (28, 29) which are each ~~designed to be connected~~connectable to a treatment station, and which terminate on the contact surface of the rotating crown, ~~and of the type in which~~

wherein the stationary crown (20) ~~involves~~includes at least one light which is ~~designed to be connected~~connectable to a pressure source of the machine, and which terminates on the contact surface of the stationary crown in such a way as to be on the trajectory of the communication ports of the rotating crown, in such a way that one treatment station is connected to the pressure source when the corresponding communication port finds ~~itself~~is in line with the light,

~~characterized in that~~wherein the communication ports of the rotating crown are distributed into at least two series (28, 29), ~~in that~~ the communication ports of one same series follow the same trajectory while the communication ports of two different series follow different trajectories, ~~in that~~

wherein the stationary crown (20) ~~implies~~has as many distinct series of at least one light, as the number of the series of communication ports, each of the lights being fitted on the trajectory of one of the series of communication ports, and ~~in that~~ the two independent and equivalent pressure sources are each connected to one light of two distinct series.

16. (currently amended): ~~Distributor~~ A rotating distributor according to ~~Claim~~ claim 15, characterized in that wherein the contact surfaces (24, 26) of the two crowns are annular faces, perpendicular to ~~the~~ an axis of rotation (X-X) of the rotating crown (22).

17. (currently amended): ~~Distributor~~ A rotating distributor according to ~~Claim~~ claim 16, characterized in that wherein the communication ports (28, 29) of one same series are fitted along a circle, and in that the two series of communication ports are fitted according to two circles of different diameters.

18. (currently amended): ~~Distributor~~ A rotating distributor according to claim 15, characterized in that wherein the communication ports (28, 29) of one same series are distributed angularly in a regular manner around ~~the~~ an axis of rotation (X-X), and in that the communication ports of the two different series involving the same number of ports are intercalated angularly.

19. (currently amended): ~~Distributor~~ A rotating distributor according to claim 17, characterized in that wherein the lights (34, 35) corresponding to two sources of pressure (A1, A2) are fitted on the same angular displacement (α) and on the different diameters corresponding respectively to the diameters of the circles according to which are fitted the series of communication ports (28, 29) corresponding to the ~~said~~ sources of pressure.

20. (currently amended): ~~Distributor~~ A rotating distributor according to claim 17, ~~characterized in that~~ wherein two consecutive communication ports of one same series (28, 29), are separated by an angular displacement (β) at least equal to the angular displacement (α) on which is fitted the light (34, 35) corresponding to the ~~said~~ series of communication ports.

21. (currently amended): ~~Distributor~~ A rotating distributor according to claim 15, ~~characterized in that~~ wherein the stationary crown includes, for each series of lights, at least two more lights (34, 36), ~~the one following the other~~, and in that these two lights (34, 36) of one same series, are separated by an angular displacement (δ) preventing the simultaneous connection one communication port with two lights.